IN THE CLAIMS

1.   (currently amended)   In ~~carrier~~ a document having a digital security image on or in the carrier, the improvements of the digital security image comprising:

at least a first and second security characteristic visually almost imperceptibly incorporated in the digital security image, wherein the first security characteristic is detectably copied onto a copy when copying the ~~carrier~~ document and the second security characteristic is not copied onto the copy when copying the ~~carrier~~ document, a resolution of the first security characteristic being higher than 100 dpi and a resolution of the second security characteristic being higher than the resolution of the first security characteristic.

2.   (currently amended)   The ~~carrier~~ document according to claim 1, in which the resolution of the first and second security characteristics is higher than the resolving power of the human eye.

3.- 4. (canceled)

5.   (currently amended)   The ~~carrier~~ document according to claim 1, in which the first and second security characteristics have been added to the Fourier amplitude spectrum of the digital security image.

6.   (currently amended)   The ~~carrier~~ document according to claim 5, in which the first security characteristic has been added to a first frequency range of the Fourier

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amplitude spectrum of the digital security image, and a second security characteristic to a second frequency range of the Fourier spectrum of the digital security image.

7.   (currently amended)   The ~~carrier~~ document according to claim 5, in which a Fourier amplitude spectrum of the second security characteristic has been added to the Fourier amplitude spectrum of the digital security image, and Fourier phase spectrum of the second security characteristic has been added to the Fourier phase spectrum of the digital security image.

8.   (currently amended)   The ~~carrier~~ document according to claim 1, in which the digital security image is a colour image.

9.   (currently amended)   The ~~carrier~~ document according to claim 8, in which the security characteristics have been incorporated in at least one colour component of the digital security image.

10.   (currently amended)   The ~~carrier~~ document according to claim 9, in which the security characteristics have been incorporated in the same colour component.

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11.   (currently amended)   The ~~carrier~~ document according to claim 1, in which a first security characteristic has been incorporated in a frequency range of the Fourier amplitude spectrum which has a resolution of approximately 150-600 dpi in the spatial domain and a second security characteristic in a frequency range of the Fourier amplitude spectrum which has a resolution higher than the resolution of the first security characteristic in the spatial domain.

12.   (currently amended)   In a ~~carrier~~ document having a digital security image provided with at least a first and a second security characteristic at substantially the same position on or in the ~~carrier~~ document, the improvements wherein the first security characteristic and the second security characteristic have a frequency that is higher than visually perceptible to the human eye, the first security characteristic in the Fourier frequency domain has a frequency that is lower than the highest of print and scan resolution of copying equipment and the second security characteristic in the Fourier frequency domain has a frequency of at least twice the highest of the print and scan resolution of copying equipment.

13.   (currently amended)   In a ~~carrier~~ document having a digital security image provided with at least a first and a second security characteristic at substantially the same position on or in ~~carrier~~ the document, the improvements wherein the first security characteristic in the Fourier domain is in a range which has a frequency of between 150 and 400 dpi in the spatial domain, and the second security characteristic in the Fourier frequency domain is in a range which has a resolution that is higher than 400 dpi in the spatial domain.

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14.   (currently amended)   The ~~carrier~~ document according to claim 13, in which the

first and second security characteristics have been incorporated in the amplitude spectrum

of the Fourier frequency domain.

15.   (currently amended)   In a ~~carrier~~ document having a digital security image

provided with a secured image, the improvements wherein the amplitude spectrum of the

Fourier transform of the secured image is an addition sum of the amplitude spectrum of

the Fourier transform of the digital security image, a first image having frequencies in the

amplitude spectrum which have a resolution higher than 150 dpi in the spatial domain and

the transformed of the amplitude spectrum of the Fourier transform of a second image

having frequencies in the amplitude spectrum which have a resolution in the spatial

domain that is higher than the resolutions of the first image.

16.   (currently amended)   The ~~carrier~~ document according to claim 15, in which the

transformation is a low-pass filter followed by a transformation which converts the low

frequencies into frequencies above a threshold value, the transformations being carried

out in the Fourier frequency domain.

17.   (original)   A method for arranging security elements on a carrier,

particularly a document, in which a first security characteristic with a resolution higher

than 100 dpi and a second security characteristic with a resolution higher than the

resolution of the first security characteristic and higher than a display device is arranged

in an original image for obtaining a security image, after which the security image is

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arranged on the carrier as security characteristic.

18.   (previously presented)   A method according to claim 17, in which the digital security image is converted into a representation that is computer-processable, and software loaded in a computer memory applies a high-passage filter operation and a diode function operation on the representation, compares the result with the computer-processable representation of a first security image, calculates the Fourier transformed of the representation, and compares the amplitude spectrum to a second security image.

19.   (previously presented)   A device for detecting a digital security image in or on a carrier, the device comprising

a recording device for recording a recorded image of the carrier in computer-processable form,

a computer, and

means for transmitting the recorded image from the recording device to a the computer,

wherein the computer has a memory, software for locating the digital security image in the recorded image, a calculating unit for calculating the Fourier transform of the digital security image in the memory, and display means for displaying an assessment of the authenticity of the carrier, wherein the digital security image in or on the carrier comprises a first security characteristic with a resolution higher than 100 dpi and a second security characteristic with a resolution higher than the resolution of the first security characteristic, and the software further comprises a detection unit for detecting the first security characteristic and the second security characteristic in the digital security image.

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20.   (currently amended)   A computer-readable storage medium holding a digital security image in a computer-procesable form which, when reproduced on a ~~carrier~~ document, comprises at least a first and second security characteristic visually almost imperceptibly incorporated in the reproduced digital security image, wherein the first security characteristic is detectably copied on a copy when copying the ~~carrier~~ document and the second security characteristic is not copied onto said copy when copying the ~~carrier~~ document, the first security characteristic having a resolution higher than 100 dpi and the second security characteristic having a resolution higher than the resolution of the first security characteristic.

21.   (currently amended)   A computer-readable storage medium provided with software which, when running on a computer provided with a memory with an original digital image, instructs said computer to arrange a first and second security characteristic in[[,]] the original digital in order to provide a security image which, when applied onto or in a substrate, has the first security characteristic with a resolution higher than 100 dpi and the second security characteristic with a resolution higher than the resolution of the first security characteristic.

22.   (currently amended)   A computer-readable storage medium provided with software which, when running on a computer provided with a memory with a security image which, when applied onto or in a substrate, has a first security characteristic with a resolution higher than 100 dpi and a second security characteristic with a resolution higher than the resolution of the first security characteristic, instructs the computer to

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detect[[ing]] the first and second security characteristic in the digital security image.

23.- 24. (canceled)

25.   (currently amended)   The ~~carrier~~ document according to claim 6, in which a Fourier amplitude spectrum of the second security characteristic has been added to the Fourier amplitude spectrum of the digital security image, and a Fourier phase spectrum of the second security characteristic has been added to the Fourier phase spectrum of the digital security image.

26.   (currently amended)   The ~~carrier~~ document according to claim 13, in which the first security characteristic in the Fourier domain is in a range which has a frequency between 250 and 400 dpi.

27.   (currently amended)   The ~~carrier~~ document according to claim 13, in which the ~~first~~ second security characteristic in the Fourier domain is in a range which has a ~~frequency~~ resolution higher than 800 dpi.

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